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Perspectives in Disease Prevention and Health Promotion

Fetal Alcohol Syndrome: Public Awareness Week

Clinical studies have shown that heavy use of alcohol by pregnant women may result in a pattern of severe and irreversible abnormalities in their offspring called the fetal alcohol syndrome (FAS). Children with FAS may show a wide range of disabilities. The most consistent features include prenatal and postnatal growth deficiency in terms of decreased weight, height, and head circumference; impairment in intellectual and motor functioning; and a characteristic pattern of cranio-facial abnormalities.

The number of children in the United States with FAS is not known. Its reported prevalence at birth varies widely, depending on the location and population under study. The overall prevalence appears to be in the range of 1-2 per 1,000 births based both on American studies (*1-3*) and European studies (*4,5*). As might be expected, estimates of FAS prevalence among babies born to women identified as problem drinkers or alcohol abusers are higher, ranging from 23 to 29 per 1,000 (*1-3*).

Based on current estimates, FAS in the United States is a leading known cause of mental retardation and birth defects. The birth prevalence of FAS is similar to that of two other major birth defects — Down syndrome (1/1,000 live births) and neural tube defects (anencephaly and spina bifida) (1/1,000 births). In addition to FAS, other birth effects, including low birthweight, irritability during the newborn period, and various complications of pregnancy, may be associated with maternal alcohol use during pregnancy.

FAS is potentially preventable. A survey of 4,405 married mothers who delivered babies in 1980 found that 30% of women who drank before pregnancy stopped drinking during pregnancy (*6*). Some pregnant women spontaneously reduce their alcohol consumption for physiological reasons (*7*). It is also likely that pregnant women will reduce or cease their alcohol intake if they are made aware of the deleterious effects of alcohol on their babies. Evidence indicates that women who reduce or eliminate alcohol consumption before, and possibly even during, pregnancy may increase their chances of delivering infants of normal birthweight (*8*). The effects of mild to moderate alcohol consumption are uncertain; also uncertain are the critical periods during pregnancy—from conception to delivery—when the fetus is at risk.

In recognition of the potential for serious consequences of fetal exposure to alcohol and in the interest of increasing both public and professional awareness of the preventability of these consequences, the President has proclaimed the week of January 15-21, 1984, "National Fetal Alcohol Syndrome Awareness Week." Obstetricians and other health providers involved in the care of pregnant women are in a key position to intervene to prevent FAS. However, efforts to increase awareness of FAS and its preventability must be directed at the general public and at all health professionals.

Fetal Alcohol Syndrome — Continued

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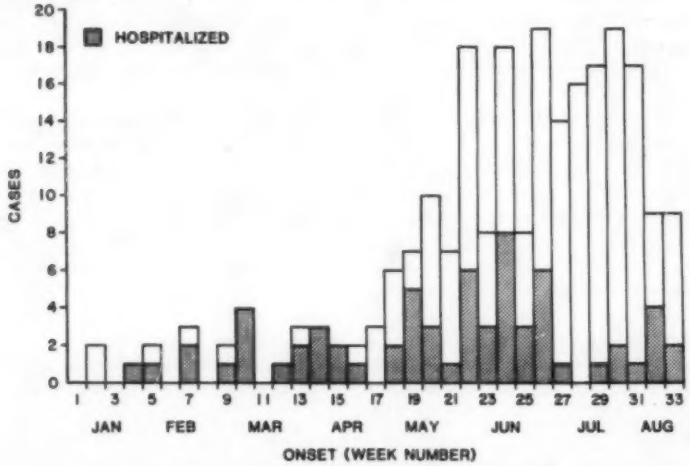
Epidemiologic Notes and Reports

Pertussis Outbreak — Oklahoma

From January 1, through December 10, 1983, 330 cases of pertussis were reported from Oklahoma. Detailed analysis of the first 237 patients, with onsets of illness through August 28 and reported through September 16, is presented below. All met the following case definition: illness (1) confirmed by culture and/or direct fluorescent antibody test (FA) for *Bordetella pertussis*, (2) diagnosed as pertussis by a physician, or (3) characterized by a cough of 2 weeks or more and epidemiologically linked to a laboratory-confirmed or physician-diagnosed case.

FIGURE 1. Reported pertussis cases, by week of onset of cough — Oklahoma,* January 1-September 16, 1983



*Excludes six patients without cough and one with unknown date of onset.

Pertussis — Continued

The diagnosis of pertussis was confirmed by culture and/or FA in 123 (52%) of the 237 cases (16% by culture, 26% by FA, 10% by both). The first reported patient in 1983 had onset of cough on January 9. From January through April, the number of reported cases occurring weekly was fairly constant (Figure 1); in May, however, a marked increase occurred. Cases peaked during June and July. From January 1 to September 15, cases were reported from 27 (35%) of 77 of the state's counties.

Eighty-nine (38%) cases occurred among children under 1 year old (Table 1). Of these, 62 (70%) occurred among children less than 6 months of age; 20% were 15 years of age or older. One hundred forty-three (60%) cases occurred among children 3 months through 6 years of age, the target group for pertussis vaccination. Of the 136 patients in this age group with known immunization status, 49 (36%) were up-to-date for age for diphtheria and tetanus toxoids and pertussis vaccine (DTP) (Table 2) according to criteria derived from the Immunization Practices Advisory Committee (ACIP) recommendations.*

Sixty-eight (29%) ill individuals were hospitalized. The hospitalization rate for patients

*Up-to-date if received: one dose by 3 months of age; two doses by 5 months of age; three doses by 7 months of age; four doses by 19 months of age; five doses by 5 years of age, unless fourth dose received on or after 4th birthday.

TABLE 1. Reported pertussis cases, by age group—Oklahoma, January 1-September 16, 1983

Age group	Number	(%)
< 6 months	62	(26)
6-11 months	27	(11)
1-4 years	73	(31)
5-9 years	20	(8)
10-14 years	7	(3)
≥ 15 years	48	(20)
Total	237	(100)

TABLE 2. Reported pertussis patients, by age group and immunization status for DTP*—Oklahoma, January 1-September 16, 1983

Age group (months)	Doses of DTP 0	1	2	3	4	5	Unknown	Total	(%)	Up-to-date†	(%)§
< 3	22	6					1	29	(12%)	¶	
3-6	18	14	6	1			1	40	(17%)	19	(48%)
7-18	6	9	9	10	1		2	37	(16%)	11	(30%)
19-83	7	11	10	11	21	2	4	66	(28%)	19	(29%)
84+	8	1	3	5	15	3	30	65	(27%)	3	(5%)
Total	61	41	28	27	37	5	38	237	(100%)	52	(21%)

*Diphtheria and tetanus toxoids and pertussis vaccine.

†Up-to-date if received: one dose by 3 months of age; two doses by 5 months of age; three doses by 7 months of age; four doses by 19 months of age; five doses by 5 years of age, unless fourth dose received on or after 4th birthday.

§Percentage of total with known immunization status.

¶All children in this age group are considered in compliance with ACIP recommendations.

Pertussis — Continued

under 1 year of age was 56% (50/89). Of these, 39 children were under 6 months of age. Persons with pertussis aged 3-11 months whose vaccinations were not up-to-date for age were 4.6 times more likely to be hospitalized than those who were up-to-date. Five (18%) of the 28 hospitalized patients 3-11 months of age were up-to-date for DTP immunization, compared with 20 (91%) of the 22 nonhospitalized patients, ($p < 0.001$). No deaths were reported. Two unimmunized children, aged 1 month and 3 months, experienced seizures; both were hospitalized, and neither had apparent neurologic sequelae at the time of discharge.

Detailed clinical information was available for 19 children admitted to a hospital in Oklahoma City. All were under 3 years of age; 14 (74%) were less than 6 months of age and, therefore, too young to have received three doses of DTP according to the routine schedule recommended by the ACIP. Three children (16%) were admitted to the intensive care unit; seven (37%) had radiologic evidence of pneumonia, and two (11%) (previously cited) had seizures. The hospital stay for the 19 children ranged from 1 to 51 days (mean 10 days).

The largest number of cases (57) occurred in Oklahoma County and were scattered diffusely throughout the county without evidence of geographic clustering. Chains of transmission of illness were identified in 26 instances involving 136 cases. When cases could be

(Continued on page 9)

TABLE I. Summary—cases specified notifiable diseases, United States

Disease	First Week Ending			Cumulative, First Week Ending		
	January 7, 1984	January 8, 1983	Median 1979-1983	January 7, 1984	January 8, 1983	Median 1979-1983
Acquired Immunodeficiency Syndrome (AIDS)	25	N	N	25	N	N
Aseptic meningitis	68	75	75	68	75	75
Encephalitis: Primary (arthropod-borne & unspec.)	6	17	11	6	17	11
Post-infectious	1	-	1	1	-	1
Gonorrhea: Civilian	11,929	18,346	18,213	11,929	18,346	18,213
Military	189	369	424	189	369	424
Hepatitis: Type A	208	314	320	208	314	320
Type B	250	326	266	250	326	266
Non A, Non B	40	28	N	40	28	N
Unspecified	37	92	113	37	92	113
Legionellosis	3	12	N	3	12	N
Leprosy	5	9	2	5	9	2
Malaria	15	5	12	15	5	12
Measles: Total*	7	11	15	7	11	15
Indigenous	4	6	N	4	6	N
Imported	3	5	N	3	5	N
*Meningococcal infections: Total	33	42	40	33	42	40
Civilian	33	40	40	33	40	40
Military	-	2	-	-	2	-
Mumps	39	59	60	39	59	60
Pertussis	4	9	9	4	9	9
Rubella (German measles)	4	14	22	4	14	22
Syphilis (Primary & Secondary): Civilian	294	611	518	294	611	518
Military	1	2	6	1	2	6
Toxic Shock syndrome	4	8	N	4	8	N
Tuberculosis	214	218	239	214	218	239
Tularemia	2	4	1	2	4	1
Typhoid fever	-	4	4	-	4	4
Typhus fever, tick-borne (RMSF)	2	1	1	2	1	1
Rabies, animal	25	87	72	25	87	72

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1984		Cum. 1984
Anthrax	-	Plague	-
Botulism: Foodborne	-	Poliomyelitis: Total	-
Infant	-	Paralytic	-
Other	-	Psittacosis	-
Brucellosis	-	Rabies, human	-
Cholera	-	Tetanus	-
Congenital rubella syndrome	-	Trichinosis (N.J. 2)	2
Diphtheria	-	Typhus fever, flea-borne (endemic, murine) (Calif. 1)	1
Leptospirosis	-		

*Three of the 7 reported cases for this week were imported from a foreign country or can be directly traceable to a known internationally imported case within two generations.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending January 7, 1984 and January 8, 1983 (First Week)

Reporting Area	AIDS	Aseptic Meningitis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	Cum. 1984	1984	Cum. 1984	Cum. 1984	Cum. 1984	Cum. 1983	1984	1984	1984	1984	1984	Cum. 1984
UNITED STATES	25	69	6	1	11,929	16,346	208	250	40	37	3	5
NEW ENGLAND	-	1	-	-	385	437	-	8	-	6	-	-
Maine	-	-	-	-	12	20	-	3	-	-	-	-
N.H.	-	1	-	-	4	12	-	1	-	1	-	-
Vt.	-	-	-	-	5	7	-	-	-	-	-	-
Mass.	-	-	-	-	153	163	-	4	-	5	-	-
R.I.	-	-	-	-	32	29	-	-	-	-	-	-
Conn.	-	-	-	-	158	206	-	-	-	-	-	-
MID ATLANTIC	-	4	1	-	1,055	2,129	5	30	6	1	-	-
Upstate N.Y.	-	4	-	-	-	-	-	5	-	-	-	-
N.Y. City	-	-	-	-	689	1,550	-	-	-	-	-	-
N.J.	-	-	1	-	38	200	5	25	6	1	-	-
Pa.	-	-	-	-	329	379	-	-	-	-	-	-
E.N. CENTRAL	1	14	2	-	1,375	1,910	24	21	3	3	-	1
Ohio	1	8	1	-	286	289	9	5	-	2	-	-
Ind.	-	-	-	-	88	135	-	-	-	-	-	-
Ill.	-	-	-	-	247	452	7	5	-	-	-	-
Mich.	-	6	1	-	641	829	8	10	3	1	-	1
Wis.	-	-	-	-	113	205	-	1	-	-	-	-
W.N. CENTRAL	-	3	-	-	655	727	7	10	-	1	1	-
Minn.	-	-	-	-	190	94	1	4	-	-	-	-
Iowa	-	1	-	-	63	54	1	2	-	-	-	-
Mo.	-	2	-	-	186	308	2	4	-	1	1	-
N. Dak.	-	-	-	-	10	9	-	-	-	-	-	-
S. Dak.	-	-	-	-	24	16	3	-	-	-	-	-
Nebr.	-	-	-	-	45	83	-	-	-	-	-	-
Kans.	-	-	-	-	147	163	-	-	-	-	-	-
S. ATLANTIC	2	13	2	1	2,777	4,127	7	63	8	7	1	-
Del.	-	-	1	-	77	105	1	2	1	-	-	-
Md.	-	6	1	-	411	640	1	27	3	2	1	-
D.C.	1	-	-	-	136	265	-	4	-	1	-	-
Va.	-	3	-	1	322	307	-	10	2	1	-	-
W. Va.	-	1	-	-	19	35	1	-	-	-	-	-
N.C.	-	-	-	-	659	390	1	5	-	1	-	-
S.C.	-	-	-	-	287	509	-	10	2	2	-	-
Ga.	-	3	-	-	-	790	3	3	-	-	-	-
Fla.	1	-	-	-	886	1,086	-	2	-	-	-	-
E.S. CENTRAL	-	5	-	-	1,202	1,946	20	18	2	1	-	-
Ky.	-	1	-	-	111	232	15	7	1	-	-	-
Tenn.	-	2	-	-	466	597	1	6	1	1	-	-
Ala.	-	2	-	-	473	845	4	5	-	-	-	-
Miss.	-	-	-	-	152	272	-	-	-	-	-	-
W.S. CENTRAL	-	-	-	-	2,075	2,717	1	-	-	-	-	-
Ark.	-	-	-	-	216	216	-	-	-	-	-	-
La.	-	-	-	-	789	72	-	-	-	-	-	-
Okla.	-	-	-	-	284	323	1	-	-	-	-	-
Tex.	-	U	-	-	786	2,106	-	U	U	U	U	-
MOUNTAIN	-	3	-	-	353	317	22	12	4	2	-	-
Mont.	-	-	-	-	24	18	-	-	-	-	-	-
Idaho	-	1	-	-	16	9	-	-	-	-	-	-
Wyo.	-	-	-	-	7	28	2	-	1	-	-	-
Colo.	-	2	-	-	91	116	12	7	2	1	-	-
N. Mex.	-	-	-	-	54	57	4	1	-	-	-	-
Ariz.	-	-	-	-	88	-	-	-	-	-	-	-
Utah	-	-	-	-	19	21	2	-	1	-	-	-
Nev.	-	-	-	-	55	70	2	4	-	1	-	-
PACIFIC	22	25	1	-	2,072	4,036	122	88	17	16	1	4
Wash.	-	2	-	-	-	154	2	1	1	1	-	-
Oreg.	-	-	-	-	97	124	19	1	1	-	-	-
Calif.	22	17	1	-	1,888	3,673	99	84	14	14	1	3
Alaska	-	-	-	-	53	27	-	-	-	-	-	-
Hawaii	-	6	-	-	34	58	2	2	1	1	-	1
Guam	-	U	-	-	-	6	U	U	U	U	U	-
P.R.	-	-	-	-	60	53	-	-	-	-	-	-
V.I.	-	-	-	-	6	14	-	-	-	-	-	-
Pac. Trust Terr.	-	U	-	-	-	-	U	U	U	U	U	-

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending January 7, 1984 and January 8, 1983 (First Week)

Reporting Area	Malaria	Measles (Rubeola)					Menin-gococcal infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported *		Total									
	Cum. 1984	1984	Cum. 1984	1984	Cum. 1984	Cum. 1983	Cum. 1984	1984	Cum. 1984	1984	Cum. 1984	Cum. 1983	1984	Cum. 1984	Cum. 1983
UNITED STATES	15	4	4	3	3	11	33	39	39	4	4	9	4	4	14
NEW ENGLAND	1	-	-	-	-	-	-	2	2	1	1	-	-	-	-
Maine	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
N.H.	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
Vt.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mass.	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R.I.	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-
Conn.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MID ATLANTIC	-	-	-	-	-	-	3	7	7	1	1	1	-	-	-
Upstate N.Y.	-	-	-	-	-	-	-	2	2	1	1	-	-	-	-
N.Y. City	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
N.J.	-	-	-	-	-	-	3	3	3	-	-	1	-	-	-
Pa.	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
E.N. CENTRAL	-	-	-	-	-	7	7	15	15	-	-	4	1	1	3
Ohio	-	-	-	-	-	-	6	2	2	-	-	2	-	-	1
Ind.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ill.	-	-	-	-	-	7	2	6	6	-	-	-	1	1	-
Mich.	-	-	-	-	-	-	-	7	7	-	-	-	-	-	-
Wis.	-	-	-	-	-	-	-	-	-	-	-	2	-	-	2
W.N. CENTRAL	1	-	-	-	-	-	2	2	2	1	1	-	-	-	3
Minn.	-	-	-	-	-	-	-	-	-	1	1	-	-	-	2
Iowa	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Mo.	1	-	-	-	-	-	1	1	1	-	-	-	-	-	-
N. Dak.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nebr.	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
Kans.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
S. ATLANTIC	2	-	-	1	1	-	12	2	2	-	-	1	-	-	1
Del.	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Md.	1	-	-	1 †	1	-	1	2	2	-	-	-	-	-	-
D.C.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Va.	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
W. Va.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N.C.	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
S.C.	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-
Ga.	-	-	-	-	-	-	4	-	-	-	-	1	-	-	1
Fla.	-	-	-	-	-	-	1	N	N	-	-	-	-	-	-
E.S. CENTRAL	-	-	-	-	-	-	1	1	1	-	-	-	-	-	1
Ky.	-	-	-	-	-	-	-	1	1	-	-	-	-	-	1
Tenn.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ala.	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Miss.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W.S. CENTRAL	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-
Ark.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
La.	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Okla.	-	-	-	-	-	-	-	N	N	-	-	-	-	-	-
Tex.	-	U	-	U	-	-	-	U	-	U	-	1	-	-	-
MOUNTAIN	-	4	4	-	-	-	2	-	-	-	-	1	-	-	-
Mont.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wyo.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Colo.	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
N. Mex.	-	-	-	-	-	-	-	N	N	-	-	1	-	-	-
Ariz.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Utah	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-
Nev.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACIFIC	11	-	-	2	2	4	5	10	10	1	1	1	3	3	6
Wash.	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oreg.	-	-	-	-	-	-	1	N	N	-	-	-	-	-	-
Calif.	10	-	-	2 †	2	4	4	10	10	1	1	1	3	3	6
Alaska	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Guam	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-
P.R.	-	-	-	-	-	1	-	1	1	-	-	-	-	-	-
V.I.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pac. Trust Terr.	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-

*For measles only, imported cases includes both out-of-state and international importations.

N: Not notifiable U: Unavailable †International §Out-of-state

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending January 7, 1984 and January 8, 1983 (First Week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic-shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1984	Cum. 1983	1984	1984	Cum. 1984	Cum. 1984	Cum. 1984	Cum. 1984	Cum. 1984
UNITED STATES	294	611	4	214	214	2	-	2	25
NEW ENGLAND	2	26	1	3	3	-	-	-	1
Maine	-	-	-	-	-	-	-	-	1
N.H.	-	-	-	-	-	-	-	-	-
Vt.	-	-	-	-	-	-	-	-	-
Mass.	1	16	-	2	2	-	-	-	-
R.I.	1	-	1	-	-	-	-	-	-
Conn.	-	11	-	1	1	-	-	-	-
MID ATLANTIC	46	62	-	43	43	-	-	-	2
Upstate N.Y.	-	-	-	-	-	-	-	-	-
N.Y. City	30	38	-	22	22	-	-	-	-
N.J.	4	10	-	16	16	-	-	-	-
Pa.	12	14	-	5	5	-	-	-	2
E.N. CENTRAL	14	35	-	14	14	-	-	-	7
Ohio	4	12	-	9	9	-	-	-	-
Ind.	9	4	-	-	-	-	-	-	1
Ill.	-	11	-	5	5	-	-	-	2
Mich.	-	2	-	-	-	-	-	-	-
Wis.	1	6	-	-	-	-	-	-	4
W.N. CENTRAL	7	16	-	1	1	-	-	-	3
Minn.	2	8	-	-	-	-	-	-	-
Iowa	2	1	-	-	-	-	-	-	2
Mo.	3	6	-	-	-	-	-	-	-
N. Dak.	-	-	-	-	-	-	-	-	1
S. Dak.	-	-	-	-	-	-	-	-	-
Nebr.	-	-	-	-	-	-	-	-	-
Kans.	-	1	-	1	1	-	-	-	-
S. ATLANTIC	103	167	-	43	43	-	-	-	4
Del.	-	1	-	-	-	-	-	-	-
Md.	14	5	-	10	10	-	-	-	-
D.C.	3	5	-	2	2	-	-	-	-
Va.	8	4	-	-	-	-	-	-	2
W. Va.	-	-	-	3	3	-	-	-	1
N.C.	9	10	-	5	5	-	-	-	-
S.C.	11	13	-	13	13	-	-	-	-
Ga.	-	36	-	-	-	-	-	-	1
Fla.	58	93	-	10	10	-	-	-	-
E.S. CENTRAL	19	38	-	14	14	-	-	-	3
Ky.	-	-	-	4	4	-	-	-	1
Tenn.	8	-	-	2	2	-	-	-	-
Ala.	10	32	-	8	8	-	-	-	2
Miss.	-	6	-	-	-	-	-	-	-
W.S. CENTRAL	39	123	-	-	-	-	-	-	4
Ark.	5	3	-	-	-	-	-	-	3
La.	14	-	-	-	-	-	-	-	-
Okla.	2	4	-	-	-	-	-	-	1
Tex.	18	116	U	U	-	-	-	-	-
MOUNTAIN	6	5	-	2	2	2	-	2	-
Mont.	-	1	-	-	-	-	-	2	-
Idaho	-	-	-	-	-	-	-	-	-
Wyo.	1	1	-	-	-	-	-	-	-
Colo.	2	3	-	-	-	-	-	-	-
N. Mex.	-	-	-	-	-	-	-	-	-
Ariz.	3	-	-	2	2	-	-	-	-
Utah	-	-	-	-	-	2	-	-	-
Nev.	-	-	-	-	-	-	-	-	-
PACIFIC	59	139	3	94	94	-	-	-	1
Wash.	-	6	-	1	1	-	-	-	-
Oreg.	2	-	-	-	-	-	-	-	-
Calif.	57	132	3	93	93	-	-	-	1
Alaska	-	-	-	-	-	-	-	-	-
Hawaii	-	1	-	-	-	-	-	-	-
Guam	-	-	U	U	-	-	-	-	-
P.R.	18	-	-	-	-	-	-	-	-
V.I.	-	-	-	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	U	-	-	-	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending January 7, 1984 (First Week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	780	523	173	47	18	19	69
Boston, Mass.	208	129	52	14	5	8	14
Bridgeport, Conn.	51	36	10	4	1	-	5
Cambridge, Mass.	42	32	8	-	1	1	5
Fall River, Mass.	22	16	5	1	-	-	-
Hartford, Conn.	67	49	12	4	1	1	9
Lowell, Mass.	33	20	12	-	1	-	1
Lynn, Mass.	33	28	3	1	1	-	3
New Bedford, Mass.	31	24	5	1	1	-	4
New Haven, Conn.	35	25	5	3	1	1	3
Providence, R.I.	81	51	18	5	2	5	6
Somerville, Mass.	17	8	4	4	1	-	1
Springfield, Mass.	62	36	18	5	1	2	6
Waterbury, Conn.	29	22	4	2	1	-	4
Worcester, Mass.	69	47	17	3	1	1	8
MID. ATLANTIC	2,783	1,850	625	194	52	62	129
Albany, N.Y.	52	43	6	-	1	2	3
Allentown, Pa.	18	14	4	-	-	-	-
Buffalo, N.Y.	118	67	38	8	2	3	7
Camden, N.J.	45	28	8	3	2	4	3
Elizabeth, N.J.	18	10	8	-	-	-	-
Erie, Pa.†	59	39	17	1	2	-	3
Jersey City, N.J.	49	30	14	4	1	-	-
N.Y. City, N.Y.	1,536	1,011	332	132	28	33	62
Newark, N.J.	49	20	17	7	2	3	6
Paterson, N.J.	35	26	5	2	1	1	3
Philadelphia, Pa.†	290	186	67	22	6	9	11
Pittsburgh, Pa.†	85	52	27	3	2	1	2
Reading, Pa.	20	18	2	-	-	-	1
Rochester, N.Y.	135	109	16	3	4	3	12
Schenectady, N.Y.	29	24	4	1	-	-	4
Scranton, Pa.†	44	27	15	2	-	-	3
Syracuse, N.Y.	97	64	27	3	1	2	2
Trenton, N.J.	34	23	10	-	1	-	-
Utica, N.Y.	24	20	3	1	-	-	1
Yonkers, N.Y.	46	39	5	2	-	-	4
E.N. CENTRAL	2,541	1,809	599	153	80	100	115
Akron, Ohio	63	39	16	3	1	4	-
Canton, Ohio	44	34	9	-	1	-	2
Chicago, Ill	819	357	132	48	28	58	17
Cincinnati, Ohio	112	73	26	6	5	2	12
Cleveland, Ohio	144	84	40	10	5	5	3
Columbus, Ohio	135	74	44	10	4	3	8
Dayton, Ohio	116	76	34	2	-	4	6
Detroit, Mich.	364	224	99	26	13	3	10
Evansville, Ind.	73	47	17	4	3	2	3
Fort Wayne, Ind.	64	46	15	-	-	3	8
Gary, Ind.	12	8	2	1	1	-	-
Grand Rapids, Mich.	35	26	9	-	-	-	4
Indianapolis, Ind.	153	96	35	12	8	2	5
Madison, Wis.	45	30	11	2	2	-	5
Milwaukee, Wis.	194	137	36	14	1	6	4
Peoria, Ill.	33	25	6	2	-	-	2
Rockford, Ill.	43	21	16	4	-	2	4
South Bend, Ind.	67	45	16	1	4	1	7
Toledo, Ohio	153	109	27	8	5	4	13
Youngstown, Ohio	72	58	10	2	1	1	1
W.N. CENTRAL	669	446	146	38	15	22	39
Des Moines, Iowa	69	50	13	2	2	2	5
Duluth, Minn.	22	13	5	1	-	3	2
Kansas City, Kans.	50	29	10	5	3	3	3
Kansas City, Mo.	132	78	39	13	-	2	-
Lincoln, Nebr.	42	30	9	-	2	1	3
Minneapolis, Minn.	93	60	19	7	3	4	5
Omaha, Nebr.	92	60	25	4	2	1	9
St. Louis, Mo.	53	45	6	1	-	1	9
St. Paul, Minn.	58	43	10	2	2	1	-
Wichita, Kans.	58	40	10	3	1	4	3
S. ATLANTIC	1,157	721	278	89	28	41	47
Atlanta, Ga.	141	79	43	5	5	9	7
Baltimore, Md.	110	67	36	4	3	-	2
Charlotte, N.C.	62	41	17	2	2	-	5
Jacksonville, Fla.	113	79	25	7	1	1	3
Miami, Fla.	103	60	28	10	2	3	-
Norfolk, Va.	70	36	23	4	2	5	3
Richmond, Va.	78	50	20	5	-	3	5
Savannah, Ga.	41	29	6	4	1	1	6
St. Petersburg, Fla.	108	92	10	3	1	2	6
Tampa, Fla.	62	42	10	3	2	5	2
Washington, D.C.	235	124	52	39	8	12	7
Wilmington, Del.	34	22	8	3	1	-	1
E.S. CENTRAL	711	438	164	58	17	36	37
Birmingham, Ala.	108	70	27	5	2	4	5
Chattanooga, Tenn.	48	33	13	2	-	-	7
Knoxville, Tenn.	79	58	10	5	2	4	2
Louisville, Ky.	121	70	30	14	5	2	8
Memphis, Tenn.	146	78	38	10	1	19	9
Mobile, Ala.	79	54	12	7	3	3	4
Montgomery, Ala.	33	20	8	3	1	1	1
Nashville, Tenn.	97	63	26	12	3	3	1
W.S. CENTRAL	1,306	816	327	81	50	32	88
Austin, Tex.	42	32	5	5	-	-	-
Baton Rouge, La.	62	43	14	3	2	-	6
Corpus Christi, Tex.	44	27	11	4	1	1	1
Dallas, Tex.	207	143	39	13	4	8	5
El Paso, Tex.	59	39	14	3	1	2	5
Fort Worth, Tex.	110	72	27	6	2	3	9
Houston, Tex.	289	132	100	27	21	9	13
Little Rock, Ark.	90	62	24	3	1	-	8
New Orleans, La.	97	63	28	3	2	1	-
San Antonio, Tex.	195	123	47	8	11	6	14
Shreveport, La.	41	27	7	4	1	2	-
Tulsa, Okla.	70	53	11	2	4	-	7
MOUNTAIN	692	461	141	54	19	16	38
Albuquerque, N.Mex.	90	63	15	7	2	3	3
Colo. Springs, Colo.	26	20	2	2	-	2	3
Denver, Colo.	91	61	21	7	2	-	10
Las Vegas, Nev.	94	55	23	12	3	1	5
Ogden, Utah	27	24	3	-	-	-	2
Phoenix, Ariz.	189	122	38	16	10	3	8
Pueblo, Colo.	30	19	9	-	-	1	-
Salt Lake City, Utah	49	30	10	4	1	4	1
Tucson, Ariz.	96	67	20	6	1	2	6
PACIFIC	1,820	1,228	340	140	52	60	102
Berkeley, Calif.	21	14	6	-	-	1	1
Fresno, Calif.	63	40	15	4	2	2	4
Glendale, Calif.	23	17	2	2	-	2	-
Honolulu, Hawaii	64	42	12	3	1	6	2
Long Beach, Calif.	90	58	20	7	1	4	1
Los Angeles, Calif.	427	285	80	40	17	5	15
Oakland, Calif.	73	44	13	5	7	4	5
Pasadena, Calif.	27	21	4	1	1	-	3
Portland, Oreg.	95	81	7	4	1	2	7
Sacramento, Calif.	88	53	21	7	3	4	5
San Diego, Calif.	145	104	23	9	4	5	9
San Francisco, Calif.	147	97	27	21	-	2	8
San Jose, Calif.	203	127	45	16	5	10	24
Seattle, Wash.	200	132	43	14	5	6	3
Spokane, Wash.	63	52	7	1	1	2	6
Tacoma, Wash.	91	61	15	6	4	5	9
TOTAL	12,459††	8,090	2,793	854	331	388	644

* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages.

Pertussis — Continued

linked, babysitting or extended-family settings were the most common mode of contact between households. In 47 instances of interhousehold transmission, 38 (81%) occurred in such settings. Localized transmission in neighborhoods did not appear to play an important role. A survey on August 31 of 150 homes around the residences of three pertussis patients uncovered no evidence of house-to-house transmission.

During the Oklahoma County neighborhood survey, the immunization status of children 3 months through 6 years of age was assessed. None was unvaccinated; of 57 surveyed, 37 (65%) were up-to-date for age for DTP vaccination. Concern about the adverse effects of pertussis vaccine was not cited as a reason for nonvaccination.

The population in the neighborhoods of patients was primarily served by public clinics. Immunization records of a 10% sample of the approximately 5,300 children under 7 years of age attending the main Oklahoma County clinic were reviewed on September 3 for DTP immunization to determine if the low immunization levels reflected the immunization status of children county-wide in public clinics. One hundred forty-four (27%) of 526 attendees were up-to-date. Of those 3 months through 18 months of age, 109 (49%) of 222 were up-to-date.

Measures to control transmission in accordance with ACIP recommendations were utilized throughout the outbreak. These consisted of: (1) administration of erythromycin to individuals with confirmed or suspected pertussis (to shorten the period of infectivity) if such therapy could be initiated within 3 weeks of cough onset, (2) DTP vaccination of close contacts under 7 years of age who were not up-to-date for DTP vaccinations, and (3) erythromycin chemoprophylaxis of close contacts under 1 year of age and incompletely immunized close contacts under 7 years of age.

Because the outbreak had spread throughout Oklahoma County, an effort directed toward large segments of the population appeared necessary. The principal target population consisted of persons under 7 years of age who might be rendered immune with a single dose of DTP. Assuming at least three doses of pertussis vaccine are needed for protection, 40 (17%) of the reported cases could potentially have been prevented by vaccination with a single additional dose—11 (5% of all patients) had received three doses, and four (2%) had received four doses but were not up-to-date; 25 (11%) had received two prior doses. Assuming that two doses might offer some level of protection, an additional 34 cases (14%) with only one prior dose might potentially have been prevented. Thus, 32% of cases might have been directly prevented by receipt of one additional dose in an outbreak control program. The potential indirect effect of eliminating these cases on the overall transmission of disease is unknown.

Since the survey in the patients' neighborhood indicated that 70% of children received their immunizations from public clinics, the outbreak control effort was directed toward clients of county clinics. A complete audit of immunization records of children under 7 years old attending the main Oklahoma County clinic was performed and extended to two of the four other county clinics. Initially, letters were mailed to parents of 931 children not up-to-date or due for a DTP dose residing in one quadrant of the county. Special day and evening immunization clinics were run for a 2-week period beginning September 22. During that period, 137 (15%) of the targeted children returned for immunization; parents of 25 (3%) called to indicate that DTP had been administered elsewhere; and 183 (20%) of the letters were returned as undeliverable. Notices for children not up-to-date or due for a DTP dose in the remainder of the county were subsequently mailed. Pertussis transmission continued despite the clinics. Through December 10, 40 additional cases were reported in the county.

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Pertussis — Continued

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Editorial Note: From 1975 to 1982, the annual number of reported pertussis cases in the United States varied from a low of 1,010 in 1976 to a high of 2,177 in 1977. The 28% increase in reported cases through December 10, 1983 (2,134), compared to a similar period in 1982, is not inconsistent with this pattern. However, it is not possible to determine whether the nationwide increase of reported pertussis cases in 1983 over 1982 reflects a true increase or improved recognition and/or reporting following recent lay and medical media coverage of the risks and benefits of pertussis vaccine (*1*).

The Oklahoma outbreak represents the largest number of reported cases in that state since 1956. The hospitalization rate and the complication rate for hospitalized children verify that pertussis can be severe, with substantial health impact, particularly in the very young (*2*). Furthermore, the lower hospitalization rates in patients who were up-to-date for DTP immunization, compared with those who were not up-to-date, corroborates findings of other reports that vaccinees who develop disease tend to have less severe illnesses (*2-4*).

Low immunization levels in children appear to have been a major factor associated with this outbreak. Three or more doses of DTP prevent disease in approximately 80% of recipients (*2*). High DTP coverage of children through 6 years of age (including a booster dose at 4-6 years of age) indirectly protects the highest risk group—infants less than 6 months of age who are too young to have routinely received at least three doses of DTP. Although the ACIP recommends that the first three DTP doses should be 4-8 weeks apart, the routine interval is approximately 8 weeks. In an outbreak situation, decreasing the interval between the first three doses to 4 weeks could allow more infants to receive optimal vaccine protection.

Erythromycin prophylaxis is recommended for preventing transmission in certain household members or other close contacts of pertussis patients (*5*); however, it is of uncertain value (*6*). Erythromycin has no role in pre-exposure community-wide prophylaxis during an outbreak.

Controlling a pertussis outbreak by DTP immunization is difficult for several reasons. First, a total of at least three doses is required for optimal protection. Serologic and epidemiologic data suggest that a single dose of vaccine is rarely protective; laboratory data suggest that two doses may confer protection in a small proportion of children, although clinical data corroborating this finding are lacking (*7*). Only a minor proportion of cases (32%) potentially could have been prevented by receipt of a single dose of vaccine during this outbreak.

Second, control of a pertussis outbreak by instituting a community-wide immunization recall system and providing DTP doses on an urgent basis is difficult and may not be feasible. In Oklahoma County, efforts to identify and contact inadequately immunized children and the provision of special immunization clinics resulted in only 15% of the identified children receiving a DTP dose. Emphasis should continue to be directed to ensuring that the maximal number of children under 7 years of age are always up-to-date for DTP through routine age-appropriate vaccination, since pertussis outbreaks are easier to prevent than control.

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Current Trends

Influenza — Worldwide, Canada, United States

From September through December 1983, influenza virus types A(H1N1), A(H3N2), and B have been isolated in various parts of the world, with major outbreaks in few areas.

Asia: In China, sporadic influenza A(H1N1) activity was reported during September in the northeast and south. A few type B viruses were isolated in Hong Kong in November. Influenza A(H1N1) and B viruses were also isolated in India during September. In Japan, sporadic cases of influenza A(H1N1) began in October, and by December, outbreaks had occurred in primary schools.

Africa: In South Africa, influenza A(H1N1) viruses were isolated from sporadic cases during October and November. This followed type A(H3N2) activity last spring and summer, which was generally moderate, with the exception of a large outbreak in a town where no influenza had occurred for 5 years. The attack rate in this town was estimated at 80%, and severe illnesses among schoolchildren and the elderly were reported. In central Africa, type A(H3N2) was isolated in December from a single case.

Caribbean: In Trinidad and Tobago, influenza A(H1N1) viruses were isolated in September. A small outbreak occurred in a youth camp, and a single case occurred in Port-of-Spain, but no widespread activity has been reported. Influenza B virus was isolated from a patient in Trinidad during October.

Europe: In November, influenza A(H3N2) viruses were isolated from one patient each in Italy and England and from sporadic cases among children in Bulgaria. In eastern Czechoslovakia, type A(H1N1) virus was isolated during an outbreak in a primary school in which 23% of children ages 6-14 years were affected.

Oceania: In September, influenza A(H1N1) was isolated in Victoria, Tasmania, Queensland, South Australia, and Western Australia, but no major outbreaks were reported. Following a decline in type A(H1N1 and H3N2) activity in Australia since July, influenza-like illness increased during November in Melbourne, where influenza A(H3N2) virus was isolated. In Fiji, influenza A(H1N1) viruses were isolated in September when outbreaks occurred throughout the islands.

Canada: Documented activity has been limited to sporadic cases. Four type A(H3N2) virus isolates were reported in November—three from Ontario and one from the Northwest Territories. Two type B virus isolates were reported—one in November from a virus watch program in Calgary, Alberta, and the other in December in Ontario.

United States: Influenza isolations from August to November 1983 included virus types A(H3N2), A(H1N1), and B (*1*). In December 1983 and early January 1984, further sporadic isolations of influenza virus types A(H1N1) and B were reported. Influenza B virus was isolated in Berkeley, California (from a college student), New Mexico (two children in one family), and Nassau County, New York (from a child). In Houston, Texas, where three type B virus isolates were reported in November, six additional type B isolates were obtained in December from children and adults. Influenza type A(H1N1) isolates were reported from 5-year-old children in Jacksonville, Florida (two cases), an adult in Nassau County, New York, two recruits at Lackland Air Force Base in Texas, and a 13-year-old child in Las Vegas, Nevada. Outbreaks in Alaska associated with influenza type A(H3N2) isolates that began in November diminished in December.

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Influenza – Continued

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Notice to Readers

Revision of Tables I and III (Notifiable Diseases)

In accordance with recommendations passed by the Conference of State and Territorial Epidemiologists at its annual meeting in May 1983, acquired immunodeficiency syndrome (AIDS) has been added to the list of notifiable diseases reportable to CDC and will be reported in Tables I and III beginning with this issue.

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The data in this report are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Such reports and any other matters pertaining to editorial or other textual considerations should be addressed to: ATTN: Editor, *Morbidity and Mortality Weekly Report*, Centers for Disease Control, Atlanta, Georgia 30333.

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